Applicant: Peter M. Bonutti Application No.: 10/780,444 Examiner: Julie Ann Szpira

Amendments to the Claims:

1. (Currently Amended) An implantable fastener for securing an object relative to a body tissue within the body, comprising:

a first section including a first surface and further including an extension member extending from said first surface, and

a second section including a second surface with a recess, said second surface opposing said first surface and being configured for receiving at least a portion of the extension member in the recess, the first and second sections being bondable together with the application of an energy source;

said first surface being configured to abut the object and said second surface being configured to abut the object, said first and second surfaces operative to press the object as said first and second sections are bonded together, thereby securing the object within the retainer,

wherein the object extends through the fastener substantially unobstructed, and wherein the extension shortens in length when the first and second sections are bonded together.

2-3. (Canceled)

- 4. (Previously Presented) The fastener according to claim 1, wherein the first section includes a pair of parallel channels for carrying a first portion of the object in a first of the pair of the parallel channels and for carrying a second portion of the object in a second of the pair of the parallel channels.
- 5. (Previously Presented) The fastener according to claim 4, wherein the extension member is interposed between the pair of parallel channels.

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6. (Currently Amended) The fastener according to claim 1, wherein the <u>recess in the</u>

second section includes is a channel configured for receiving the extension member.

7. (Canceled)

8. (Previously Presented) The fastener according to claim 6, wherein the extension member

is positioned within the channel, such that the object is interposed between the first and second

sections.

9. (Withdrawn) The fastener according to claim 1, wherein the first section comprises a

pair of parallel extension members.

10. (Withdrawn) The fastener according to claim 9, wherein the second section includes a

pair of parallel channels configured for receiving the parallel extension members.

11. (Withdrawn) The fastener according to claim 10, wherein the object is interposed

between the parallel extension members.

12. (Canceled).

13. (Withdrawn) The fastener according to claim 1, wherein the extension member is a

center post.

14. (Withdrawn) The fastener according to claim 13, wherein the second section includes a

flange defining a passage configured for receiving the center post.

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15. (Withdrawn) The fastener according to claim 14, wherein an exterior surface of the

center post and an interior surface of the passage are textured.

16. (Withdrawn) The fastener according to claim 15, wherein the object is wrapped around

the center post.

17. (Withdrawn) The fastener according to claim 16, wherein the center post is positioned

within the passage, such that the object is interposed between the center post and an interior

surface of the passage.

18. (Previously Presented) The fastener according to claim 1, wherein at least a portion of

at least one of the first and second sections contacting the other of the first and second sections is

textured.

19. (Previously Presented) The fastener according to claim 1, wherein the first and second

sections are interconnected.

20. (Previously Presented) The fastener according to claim 1, wherein the fastener is made

of a biodegradable material.

21. (Previously Presented) The fastener according to claim 1, wherein the fastener is made

of a heat shrink material.

22. (Previously Presented) The fastener according to claim 1, wherein the fastener includes

viable cells.

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23. (Previously Presented) The fastener according to claim 1, wherein the fastener includes

at least one pharmaceutical agent.

24. (Previously Presented) The fastener according to claim 1, wherein the energy source is

selected from the group consisting of radio frequency energy, laser energy, microwave energy,

ultrasound energy, contact heating energy, and combinations thereof.

25-48. (Canceled)

49. (Previously Presented) The fastener according to claim 1, wherein said first surface and

said second surface are configured to sandwich the object.

50. (Previously Presented) The fastener according to claim 1, wherein:

said first section has two channels formed therein, said channels being disposed opposingly

about and immediately adjacent to said extension member; and

said second section is configured to seat within said channels of said first section.

51. (Previously Presented) The fastener according to claim 1, wherein:

said extension member divides said first surface into two first subsurfaces,

a channel divides said second surface into two second subsurfaces,

one of said first subsurfaces is configured to align with one of said second subsurfaces

when said first section is bonded to said second section; and

the other of said first subsurfaces is configured to align with the other of said second

subsurfaces when said first section is bonded to said second section.

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52. (Previously Presented) The fastener according to claim 51, further comprising a suture

being disposed between at least one of said first subsurfaces and at least one of said second

subsurfaces.

53. (Previously Presented) The fastener according to claim 1, wherein said object is

elongated.

54. (Previously Presented) The fastener according to claim 1, wherein said object is a

suture.

55. (Previously Presented) The fastener according to claim 1, wherein said object is body

tissue.

56. (Previously Presented) The fastener according to claim 55, wherein said body tissue is

selected from the group consisting of soft tissue, tendon, ligament, and bone.

57. (Previously Presented) The fastener according to claim 1, wherein said object is

metallic.

58. (Currently Amended) The fastener according to claim 1, wherein said extension

member is compressible plastically deforms during the application of the energy source to move

said first surface and said second surface closer to each other.

59. (Currently Amended) The fastener according to claim 1, wherein said extension

member is compressible plastically deforms with the application of the energy source to a height

about equal to a thickness of the object to be secured.

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60. (Previously Presented) The fastener according to claim 1, wherein said extension

member is bonded to said second surface and has been compressed to a height about equal to a

thickness of the object to be secured.

61. (Previously Presented) The fastener according to claim 1, wherein said fastener is made

of a biocompatible material.

62. (Previously Presented) The fastener according to claim 1, wherein said fastener is rigid

when the energy source is not being applied.

63. (Previously Presented) The fastener according to claim 62, wherein the object secured

relative to body tissue is a rigid object.

64. (Previously Presented) The fastener according to claim 1, wherein said extension

member is bondable to said second surface with the application of the energy source.

65. (Previously Presented) The fastener according to claim 1, wherein said first section has

a top surface opposing said first surface, said top surface being configured to contact the energy

source.

66. (Previously Presented) The fastener according to claim 64, wherein the energy source

is an ultrasonic end effector.

67. (Previously Presented) The fastener according to claim 65, wherein said second section

has a bottom surface opposing said second surface, said bottom surface being configured to

contact an anvil when said top surface is contacting the energy source.

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68. (Previously Presented) The fastener according to claim 1, wherein said extension

member is fin shaped.

69. (Previously Presented) The fastener according to claim 3, wherein said object secured

relative to body tissue is a metallic object.

70. (Previously Presented) The fastener according to claim 1, wherein the object extends

through the fastener in a substantially linear fashion.

71. (Currently amended) An implantable fastener for securing an object relative to body

tissue inside the body, comprising:

a first section including a first surface and an extension member extending from the first

surface; and

a second section including a second surface with a recess, the second surface opposing the

first surface and configured for receiving at least a portion of the extension member in the recess,

the first and second sections bondable together with the application of an energy source to secure

the object to the fastener,

wherein the extension shortens in length when the first and second sections are bonded

together,

wherein the first surface and the second surface move closer to each other with the

application of the energy source to thereby secure the object to the fastener, and

wherein the object extends through the retainer in a substantially linear fashion.

72. (Previously Presented) The fastener according to claim 71, wherein ultrasonic energy

bonds the first and second surfaces together to thereby secure the object to the fastener.

73. (Canceled).

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74. (Previously Presented) The fastener according to claim 1, wherein the fastener includes an osteoinductive agent.

75. (Canceled)

76. (Currently Amended) The fastener of claim 71, wherein the extension member and or the second surface changes shape as energy is applied to the fastener.

77. (Currently Amended) A fastener implantable in a body for securing an object to body tissue within the body, comprising:

a first section including a first surface and further including an extension member extending from said first surface, and

a second section including a second surface with a recess, said second surface opposing said first surface and being configured for receiving at least a portion of the extension member in the recess, the first and second sections being bondable together by the application of ultrasonic energy and pressure to the fastener, whereby said extension member shortens in the direction of force applying pressure to the fastener, wherein said first and second surfaces abut and compress the object, thereby securing the object within the fastener.